

CLAIMS

1. A plasma nano catalytic disinfecting and purifying apparatus, comprising:
 - a casing;
 - an orientation air deflector, disposed on said casing;
 - 5 a movable air deflector, included in said casing and disposed at a position corresponding to said orientation air deflector;
 - a plasma reactor, installed below said movable air deflector, and said plasma reactor installs an anion anode plate, an anion cathode plate, a plasma anode plate and a plasma cathode plate sequentially from top to bottom, and said anion anode
 - 10 plate, anion cathode plate, plasma anode plate and plasma cathode plate are meshed stainless steel plates, and a thin film of nano catalyst is coated on the surface of said meshed stainless steel plate;
 - an electric function controller, installed at the bottom of said plasma reactor;
 - a fan box having a fan installed therein and disposed below said electric function
 - 15 controller, and said electric function controller contains an anion circuit and a plasma circuit;
 - a power switch, disposed at the bottom of said casing;
 - a front panel, installed at the front side of said casing and disposed at the bottom of said orientation air deflector;
 - 20 a function display device, installed at the upper front side of the front panel; and
 - a filter, disposed at the lower front side of said front panel.
2. The plasma nano catalytic disinfecting and purifying apparatus of claim 1, wherein said plasma anode and cathode plates are comprised of 2~30 groups.
3. The plasma nano catalytic disinfecting and purifying apparatus of claim 1,
- 25 wherein said nano catalyst is made of a nano material containing three elements of copper, titanium, and ammonium.
4. The plasma nano catalytic disinfecting and purifying apparatus of claim 1, wherein said anion and plasma circuits in said electric function controller comprise:
- 30 a power circuit, which is a 200V power circuit passing through two fuses F₁, F₂

for its operations, one being connected to the power of a fan, and the speed modulation and remote control circuit of a fan are common fan remote control circuits; a high power plasma and anode transmitting circuit including a power transformer B₁, a bridge rectifier D₁~D₄, a filter circuit C₁, a bleeder resistor R₁, and a dropping resistor R₂, and the high-voltage 220V current passes through the transformer for current transformation, filter, and step-down voltage and then the current is inputted into a three-terminal voltage regulator of IC₁ for voltage regulation and served as a current voltage input VCC of the IC₂ and IC₃;

a pulse oscillation circuit, which is a circuit comprising three nonconjunction gates in IC₂ and W₁, R₃, R₄, W₂, and C₃, and the waveform of the pulse oscillation circuit is a pulse wave whose width is adjusted by a small W₁ and whose frequency curve is adjusted by W₂, and the outputted oscillated pulse wave passes through a fourth non-conjunction gate to activate six NOT gates;

a pulse buffer distribution circuit, forming a circuit with every three NOT gates as a group for said six NOT gates, and the pulse buffer level increases the outputted current, and the frequency and voltage of said pulse oscillation circuit will not be affected when a high power tube load is changed;

a signal input and protect circuit, including a potential rectifier W₁, W₄ for rectifying the magnitude of pulse signals, an isolating capacitor C₄, C₅, and a high power tube input protection circuit D₇, D₈; and

a high power field effect power amplifier, including a high power field effect tube GB₁, GB₂, a field effect tube high-voltage protection circuit D₅, D₆, a pulse high-voltage transformer B₂, B₃, and a pulse negative-voltage output D₉ uses as an anion transmitter, a pulse positive-voltage output D₁₀ used as a plasma transmitter, an anion transmitter P₁, a plasma transmitter P₂, and a nano catalyst coated on the electrode plates of two kinds of transmitters.